1241123 - R8 SDMS

Libby Asbestos Superfund Site

Burn Chamber Study and Preliminary Results

Historic releases of Libby Amphibole asbestos (LA) to the environment at the mine site area have resulted in contamination of soil, tree bark, and duff (debris on the forest floor) in the area surrounding the mine. When wildfires occur in the mine site area, it is expected that a portion of the fibers in duff and bark may be released into the air. This could result in inhalation exposures to U.S. Forest Service firefighters, either on the ground or in the air, and depending on weather conditions might also result in exposures to residents of Libby. However, available data are not adequate to support reliable estimation of the air concentrations of asbestos fibers that may occur in smoke during a wildfire in OU3. This data may be used to help evaluate the risk to firefighters or residents associated with breathing smoke from fires originated around the mine site area.

Burn Chamber Study

- EPA has performed studies to measure the amount of LA release into smoke from burning duff
- Studies were performed at EPA's Bum Chamber Test Facility located in Research Triangle Park during early 2012.
- The duff material used for the study was collected from the mine site in an area known to contain high levels of LA.
- EPA anticipated that the temperature at which the material is burned may influence the release of both LA and particulate matter. Therefore the study was performed at both relatively low and relatively high burn temperatures, with target temperatures of about 800°F and 1600° F, respectively.

Preliminary Results

- Preliminary results show an increase in LA fibers and particulate matter in smoke with increasing bum temperatures.
- Results also show that, while LA is released into the smoke, a majority of LA fibers remain in the ash.
- Additional information will needed to be collected to assess risk to residents in Libby duing wildfires.